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EXAMINER

LUU, THANH X

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/318,249
Filing Date: May 25, 1999
Appellant(s): FURNAS, WILLIAM J.

MAILED
JAN 25 2006
GROUP 2800

Spencer T. Smith
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 9, 2006 appealing from the Office action mailed April 7, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Appeal No. 2003-0296

As Appellant has stated, this is the second appeal in the same application. Appellant has included the first appeal (Appeal No. 2003-0296) in the (9) Evidence Appendix section of the Brief. Examiner notes that a copy of the first appeal should have been included in the (10) Related Proceedings Appendix, not the Evidence Appendix.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves independent claim 1 and *dependent* claim 2 which were finally rejected on April 7, 2005. Examiner notes that Appellant's characterization of claim 2 as being independent is incorrect.

Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Juvinall et al. (U.S. Patent 4,601,395)

Examiner further notes that the related appeal should have been placed under the Related Proceedings Appendix.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Juvinall et al. (U.S. Patent 4,601,395).

Regarding claim 1, Juvinall et al. disclose (see Figs. 1, 2 and 4) a machine for inspecting the wall of a bottle comprising: a conveyor (see Fig. 1) for supporting a bottle at an inspection station, the inspection station including (see Fig. 2) a CCD camera (42 and col. 4, lines 15-17) on one side of the conveyor having a camera image, a light source (52 or 40 generally), on the other side of the conveyor, for imaging the bottle on the CCD camera image; energy controlling means for operating (diffuser plate 48, filter plate 50, controller for 52, see "controlled light source") the light source to emit light energy for defining light intensities varying between (see Figure 4a) a minimum brightness level (62a) that will permit the identification of a light blocking defect (64) and a maximum brightness level (58a), the brightness level (see Figure 4a) varying spatially, cyclically, and continuously at a rate of change which is less than a rate of change that would be identified as a defect (in Fig. 4a, the brightness level rate of change varies less than a rate of change in the defect 64), computer means (56 of Fig. 2) for analyzing the camera image by comparing neighboring pixels to determine the rate of change in brightness level to identify defects where the rate of change exceeds a defined value (see col. 4, lines 66 - col. 5, line 7, "The information processor 56 generates an event signal when the magnitude of signals from adjacent pixels in a scan differ by more than a preselected threshold.. The information processor 56 performs a connectivity analysis by evaluating the locations of a plurality of events to determine whether a defect is present.")

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2878

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juvinal et al. in view of Ishikawa et al. (U.S. Patent 4,924,083).

Regarding claim 2, Juvinal et al. disclose (see Fig. 2 and col. 4, lines 50-54) a source (52) disposed within a light source (40). Juvinal et al. also teach that (see col. 4, lines 27-30) "Light source 40... comprises a plurality of incandescent lamps disposed in three columns..." Although Fig. 2 shows only one source (52), Juvinal et al. teach that more than one light source in a column configuration is actually used. Juvinal et al. do not specifically teach the use of a plurality of LED rows. Ishikawa et al. disclose (see Fig. 18) a light source comprising a plurality of LED rows (40) for a bottle inspection device. Furthermore, it is well known that LEDs provide more efficient illumination. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use a plurality of LED rows as the light source of the device of Juvinal et al. in view of Ishikawa et al. to provide more efficient illumination and to reduce operating costs.

(10) Response to Argument

On page 11 of the Brief, Appellant asserts that 35 U.S.C. 112, sixth paragraph is not invoked because there is sufficient structure and associated functions specified in the claim.

Examiner disagrees. A claim limitation is interpreted to invoke 35 U.S.C. 112, sixth paragraph if it meets three prongs: (A) the claim limitations must use the phrase

“means for”; (B) the “means for” must be modified by functional language; and (C) the phrase “means for” must not be modified by sufficient structure, material or acts for achieving the specified function. MPEP 2181. In the instant claim, the phrase “energy controlling means for operating said light source to emit light energy for defining light intensities varying between a minimum brightness level... and a maximum brightness level...” clearly uses the phrase “means for.” In addition, the “means for” phrase is modified by the functional language (“energy controlling” and “for operating said light source to emit light energy for defining light intensities...”). Lastly, the phrase “means for” is not modified by any structure. This absence of structure is further evidenced by the fact that the Appellant describes (see page 11 of Brief) such means to include “a light source having a plurality of rows of L.E.D.’s and a structure including a computer control for setting the ‘on’ time of the individual rows of LED’s...” and in the summary of the invention (see page 8 of Brief), Appellant states that such means also includes timers. Therefore, Appellant’s statement that there is no “means for” clause or that 35 U.S.C. 112, sixth paragraph is not invoked is incorrect. Thus, as understood, interpretation of the claim requires invocation of 35 U.S.C. 112, sixth paragraph.

On pages 11-12 of the Brief, Appellant also asserts that since the light source (the bulb) of Juvinall et al. has a single uniform brightness level and the filter is passive, Juvinall et al. do not disclose an “energy controlling means for operating the light source to emit light energy for defining light intensities varying between...” as claimed.

Examiner disagrees. In the rejection, Examiner has cited bulb 52 as the light source and the combination of diffuser plate 48, filter plate 50 and controller for 52, see

"controlled light source" of Fig. 2 of Juvinall et al., as the energy controlling means.

Assuming that 35 U.S.C. 112, sixth paragraph is invoked, a showing of an equivalent structure to the one disclosed in the specification is required. First, Appellant describes (see pages 8 and 11 of Brief) the structure of "energy controlling means..." as a plurality of light sources and a timer or computer for setting the "on" time of the light source.

According to the MPEP section 2183, a prima facie case of equivalence can be shown if the prior art element (A) performs the function specified in the claims; (B) is not excluded by any explicit definition provided in the specification for an equivalent, and (C) is an equivalent of the means plus function limitation. As understood, the combination of the diffuser plate 48, filter plate 50 and the controller for 52 ("controlled light source") is equivalent to Appellant's disclosed structure because the elements perform the same function and obtains substantially the same results of energy controlling and operating the light source to emit light energy for defining light intensities varying between a minimum brightness level that will permit the identification of a light blocking defect and a maximum brightness level, the brightness level varying spatially, cyclically, and continuously at a rate of change which is less than a rate of change that would be identified as a defect. Nowhere does Appellant assert that the same function is not performed. Nowhere in the specification does it explicitly exclude such an interpretation of equivalence. Therefore, Appellant's argument with regard to a uniform intensity bulb and a passive filter is not persuasive because the combination of the diffuser plate 48, filter plate 50 and controller of 52 reads on the "energy controlling means..." as understood.

Even assuming that 35 U.S.C. 112, sixth paragraph is not invoked, Examiner believes Juvinall et al. still anticipate the claim. In which case, the controller of light source 52 would read on the limitations of “energy controlling means.” The controller operates the light source to emit light energy (illumination) for defining (with the diffuser plate 48 and filter plate 50) light intensities varying between a minimum and a maximum brightness level as claimed. Appellant does not traverse that fact that a controller operates the light source. Furthermore, nothing in the claim language precludes the interpretation of a diffuser plate 48 and filter plate 50 acting on the light energy to define the illumination pattern as claimed.

On page 12 of the Brief, Appellant further asserts that since the filter of Juvinall et al. does not operate on the light source to emit energy, the rejection is in error.

Examiner disagrees. As understood, the *combination* of a diffuser plate 48, filter plate 50 and controller for light source 52 energy controls and operates the light source to create the desired illumination pattern as claimed. That is, at least the controller for the light source 52 acts on the light source to emit energy. Furthermore, as set forth above, since the elements in combination form an equivalent structure that performs the same function and obtains substantially the same results as the claimed invention, such limitations are met, regardless of the passive nature of the filter.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

Art Unit: 2878

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Thanh X. Luu


THANH X. LUU
PATENT EXAMINER

Conferees:

Georgia Epps


AHA

Andrew Hirshfeld